Does Spousal Intimacy Improve Contraceptive Use? A Cross-Sectional Household Survey in Nigeria

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Abstract

Spousal intimacy has been argued to have the tendency to improve contraceptive use. In Nigeria, there is no empirical evidence to corroborate or refute this argument. This study attempts to fill this gap by examining the effect of spousal intimacy on contraceptive uptake using data from the Nigerian national demographic and health survey 2018. The dataset covers nationally representative 8,061 women of child-bearing age drawn from the 36 states of the country and the capital territory. Data are analyzed using the logistic regression model. We use two measures of contraceptive use: ever-used contraceptive and currently using contraceptive. Evidence shows that physical intimacy is positively and significantly associated with contraceptive use (with OR = 1.66, 95% CI: 0.28 - 0.73, for ever-used) and (OR = 1.60, 95% CI: 0.20 - 0.74, for currently using). Other covariates – education, number of children, family income, and age – are found to be significantly associated with both measures of contraceptive use. The study concludes that identifying and incorporating spousal-based innovations into family planning interventions may provide a leverage for improving contraceptive uptake in developing countries.

Keywords: Contraceptive; Spousal Intimacy; Family Planning; Reproductive Health

Abbreviations: SDGs: Sustainable Development Goals; IPV: Intimate Partner Violence; CPR: Contraceptive Prevalence Rate; FCT: Federal Capital Territory; LGAs: Local Government Areas; EAs: Enumeration Areas; NDHS: Nigeria Demographic and Health Survey; CR: Couples Recode; NBS: National Bureau of Statistics; NHREC: National Health Research Ethics Committee of Nigeria; NPopC: National Population Commission.

Introduction

Achieving universal coverage of family planning has been one of the overarching public health objectives of the Nigerian government. Specifically, the Family Planning 2020 (FP2020) initiative of the Federal Government of Nigeria was designed to enable 120 million additional women and girls to use modern contraception by 2020. This initiative is motivated by the understanding that women health is critical for their socioeconomic empowerment, and contribution to the overall economic growth and development of the country.

Studies have shown that increasing the rate of contraception use presents some socioeconomic benefits to developing countries. Economically, evidence shows that for every dollar invested in reproductive health services, $2.20 is saved in pregnancy-related healthcare costs. In addition, the longer a woman waits to have a child, the longer she can engage in income-earning activities, thereby contributing to improving the economic welfare of her household [1].

From social perspective, family planning is linked to improved birth outcomes for babies, either directly or through healthy maternal behaviors during pregnancy. Contraception use reduces pregnancy-related morbidity and mortality and the risk of developing certain reproductive cancers [2]. Evidence from Benin Republic shows that if access to and use of family planning alone is increased from 7.9% (in 2015) to 33.95% (by 2030), lives of about 200,000 under five-year children, and 10,000 mothers can be saved. This will reduce the average number of children per woman to 3.5, thereby increasing female life expectancy by 5 years [3].

From policy perspective, increasing contraceptive use could support efforts at advancing human development by empowering women to plan the size and timing of their families, allowing them to avoid unwanted pregnancies, and the associated unsafe abortions, as well as improving infant and child health. These could contribute to achieving goals 3, 4, and 5 of the Sustainable Development Goals (SDGs). Small family size ensures increased household savings and investment, leading to reduced poverty. It also ensures improved educational investment per child, leading to increased demographic dividend. Contraceptive use supports moderation in human population growth and reduced pressure on the environment and natural resources, enabling progress towards a sustainable human population [4]. These benefits are likely to elude developing countries if the facilitators and barriers to contraceptive use are not identified and incorporated into population control policies. The imperative of identifying these factors provides a compelling justification for this study.

Various studies have examined how spousal relationship (intimate or violent) affects the decision to use contraceptives. Findings in Nigeria show that women who have experienced any type of intimate partner violence (IPV) are 1.28 times more likely to discontinue contraceptive use than those who have not experienced IPV [5]. Evidence from Nepal suggests that lifetime exposure to any form of IPV is associated with sterilization [6]. Results from studies focusing on the three forms of violence, namely, emotional, physical, and sexual violence suggest that emotional violence is associated with greater odds of discontinuation of contraceptive use in Egypt [7].

A positive association between sexual violence and discontinuation is found in Jordan, while a negative correlation is the case in Tajikistan [7]. A study in South Asia finds that sexual violence against women is associated with pre-pregnancy modern contraceptive use, and higher rate of contraceptive discontinuation [8].

Positive but weak association exists between physical violence and contraceptive discontinuation in Egypt

and Honduras [7]. In Bangladesh, women exposed to physical violence were almost two times more likely to use contraceptives compared with their non-abused peers **[9]**. Nigeria women who have been physically abused had 28% higher odds of not using any contraception, while those who have suffered both physical and psychological abuse had 52% higher odds compared to those who have not experienced any form of violence [10].

Studies on the effect of IPV on method choice reveals that women experiencing physical IPV were significantly less likely to use condoms and IUDs than women not experiencing violence [11]. Women who suffered both sexual and physical violence are more likely to engage in traditional contraceptive use in South Asia [8].

Having a cordial spousal communication about family planning is assumed to positively influence couples' decision to use family planning products and services. Findings from the work of Challa S, et al. [12] reveal that spousal communication is positively correlated with ever-use of modern contraception. Spousal communication reduces the chances of covert use of modern contraceptive. Similar association between spousal communication and modern contraceptive use is found in Malaysia Najafi-Sharjabad F, et al. [13] and in Bangladesh [14].

The effect of relationship characteristics on current use of effective contraception has been documented in the literature. Evidence from the US suggests that women in casual relationship, and those whose relationship is less than one year old are less likely to use effective contraceptive method compared to women in consistent and up to one year relationship [15]. A study in Ghana shows that women who were satisfied with their relationship were more likely to use overt contraceptives rather than not using at all [16]. In another study, young adults in relationships with less intimacy are found to be less likely to use hormonal and dual methods, while those in relationship with greater intimacy are more likely to use hormone-based methods [17].

While there is a plethora of studies on partner violence, to the best of our knowledge, no study has focused on the role of spousal intimacy in determining spousal attitude towards contraceptive use in Nigeria. This study intends to fill this gap and contributes to the rather sparse literature on innovations for improving family planning in developing countries. This study becomes more important considering that emotional aspects of relationships that may influence reproductive decision making are often unrecognized in family planning interventions in developing countries [16]. The results will support policymakers and donors in the public health space to leverage on spousal relationship to

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recalibrate their family planning policies and programmes to improve contraceptive prevalence rate (CPR) in Nigeria.

The choice of Nigeria as the location of the study is informed by the demographic projection that the population of the country may reach 400 million by 2050 [18]. Historically, the Nigerian population grew from 161 million in 2010 to 217 million in 2022, comprising 49.9% male and 50.1% female. It is projected to rise to 228 million in 2024. The population of women of childbearing age (15 – 49 years old) in Nigeria stands at 40 million. Total fertility rate declined from 5.50 births per woman in 2013 to 5.14 births in 2022, and is projected to further decline to 5.0 births in 2024 [19].

The objective of the study is to understand if spousal intimacy encourages the use of contraceptives among women of child-bearing age in Nigeria. Providing an empirical insight into the role of spousal intimacy in family planning decisions enables policymakers to address the question: can we leverage on spousal intimacy to improve CPR in Nigeria?

Methodology

Study Area

Administratively, Nigeria is composed of 36 states, and the Federal Capital Territory (FCT). For political purposes, the states and the FCT are ground in to six geopolitical zones. Each state is subdivided into local government areas (LGAs), and each LGA is divided into wards. The National Population Commission (NPopC) further delineates each LGA into enumeration areas (EAs). A combination of information from cartographic material was used to identify the list of EAs, estimate the number of households, and distinguish EAs as urban or rural based on predetermined minimum sizes; any locality with more than a minimum population size of 20,000 was classified as urban.

Study Design

The study used the 2018 Nigeria Demographic and Health Survey (NDHS) couples recode (CR) data file. The NDHS is a nationally representative, population-based cross-sectional survey. The CR file contains data for 8,061 couples who both declared that they are married to each other and who completed individual interviews [20]. The questions on contraceptive use, and intimate partner violence were responded to by women only.

The NDHS is conducted by the World Bank in collaboration with the Nigerian National Bureau of Statistics (NBS). The 2018 NDHS is the latest and the fourth round of the survey. It is a nationally representative survey of approximately

42,000 households, which are also representative of the six geopolitical zones, the major religious and ethnic groups in the country, and provides comprehensive coverage of welfare indicators and socio-economic characteristics of households. The survey covers all de jure households excluding prisons, hospitals, military barracks, and school dormitories [21]. The survey protocol was reviewed and approved by the National Health Research Ethics Committee of Nigeria (NHREC) and the ICF Institutional Review Board [20].

Sampling Technique

The sampling frame used for the 2018 NDHS is the population and housing census of the Federal Republic of Nigeria, which was conducted in 2006 by the National Population Commission. The sample for the 2018 NDHS was selected using stratification. To stratify the entire country, each of the 36 states and the FCT was separated into urban and rural areas. A total of 74 sampling strata were identified. In each stratum, samples were selected independently using a two-stage selection process. In the first stage, a probability proportional to size selection was used to select 1,400 EAs. The size of an EA is equal to the size of the households in the EA.

In the second stage, all households in the EAs were listed. The resulting list served as the sampling frame for selection of households. In each EA, a fixed number of 30 households was selected through equal probability systematic sampling, resulting in a total sample size of approximately 42,000 households. Enumerators interviewed respondents from the pre-selected households. No replacements and no changes of the pre-selected households were allowed in the implementing stages. This was aimed at preventing bias.

Data Collection

The 2018 NDHS collected data from women aged 15-49 in the sampled households. Respondents were either permanent residents of the selected households or visitors who stayed in the households the night preceding the interview.

Four variants of the questionnaire were used for the survey: the household questionnaire, the woman's questionnaire, the man's questionnaire, and the biomarker questionnaire. This study uses information from the household, woman's, and man's questionnaires merged as CR data file. The household questionnaire collected basic demographic information on each person listed, including age, sex, marital status, education, and relationship to the head of the household. Responses on age, sex, and marital status of household members were used to identify women and men who were eligible for individual interviews.

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The woman's questionnaire was used to collect information from all eligible women aged 15-49 years. Information collected included background characteristics (including age, education, and media exposure), knowledge, use, and source of family planning methods, antenatal, delivery, and postnatal care, fertility preferences (including desire for more children and ideal number of children, women's work, and husbands' background characteristics.

Prior to the data collection exercise, enumerators were trained for four weeks, including the field work. The training focused on orientation on data collection instruments, and procedures. The field work was implemented by 296 enumerators, supervisors, and coordinators, and lasted for over four months.

Model Specification

The model for the study is specified following the findings of various studies linking intimate partner violence and contraceptive discontinuation. Those studies find that women who have experienced any form of partner violence are less likely to use contraceptives [13,14,22]. This study adopts a reverse perspective to this evidence and hypothesizes that spousal intimacy (absence of intimate partner violence) can improve contraceptive uptake.

Contraceptive use is of two variants, both measured as a binary variable by asking a woman two questions. The first question is: "have you ever used anything or tried to delay or avoid getting pregnant?". We denoted this as "ever-used contraceptive". The second question asks: "are you currently doing something or using any method to delay or avoid getting pregnant?". This is denoted as "currently using contraceptive". Both questions are coded "1" for positive response and "0" otherwise.

We identify three forms of spousal intimacy – emotional, sexual, and physical. To measure emotional intimacy, respondents were asked if they had ever experienced emotional abuse from husband or partner. For sexual intimacy, women were asked if they had ever been forced into unwanted sex by husband/partner, while physical intimacy was identified by asking if they had ever been punched by fist or hit by something harmful by husband/partner. For each respective questions, a positive response is coded "1", while a negative response is coded "0". Negative responses indicate presence of intimacy.

We identify other variables that may influence contraceptive use. Education has been found to associate significantly with contraceptive use. More educated women are more likely to use contraceptive than less educated ones [22-24]. In Iran, Amir E, et al. [25] finds that when compared with contraceptive non-users, women using modern contraceptives before a first birth were more likely to experience a one-to-two-year increase in education attainment after marriage. This variable is measured by the highest level of schooling completed by the respondent.

Number of children can influence the use of contraceptive. Expectedly, the more the number of children in a household, the higher the likelihood of the woman using contraceptive [26]. Family income plays a role in determining whether a woman adopts family planning. High income reduces the likelihood of using family planning since the family may have sufficient income to cater for a large family [24]. Women of child-bearing age are more likely to use contraceptive than older women, highlighting the critical role of age in contraceptive decisions [27]. Number of children in household, household income, and age (in years) of the respondent are all measured in real numbers.

The binary nature of our dependent variable requires the use of a logistic regression method for the data analysis. The proposed logistic model is specified as follows:

$$copt_i = \ln\left(\frac{\rho_i}{1-\rho_i}\right) = \delta_{1i} + \delta_{2i}sptn_i + \delta_{3i}educ_i + \delta_{4i}nuch_i + \delta_{5i}hdic_i + \delta_{6i}age_i + \varepsilon_i \quad (1)$$

Equation 1 hypothesizes that contraceptive use ($copt$) is a function of spousal intimacy ($sptn$), education attainment of the woman ($educ$), number of children in the household ($nuch$), household income ($hdic$), and age of the woman (age). δ_1 is the constant, δ_2, δ_3, δ_4, δ_5 and δ_6 are the parameter estimates of $sptn$, $educ$, $nuch$, $hdic$, and age respectively. $\left(\frac{\rho_i}{1-\rho_i}\right)$ is the odds ratio – the probability of using a contraceptive relative to the probability of not using it, while ε_i is the error term.

Results and Discussion

Table 1 shows the descriptive statistics of the study variables. About 34.3% of women who have ever-used contraceptives reported having emotional, physical, and sexual intimacy with their spouse, while only 18.3% of women currently using contraceptives reported experiencing such forms of intimacy.

Education attainment differs markedly between women who have ever used, and those currently using contraceptives. Fifteen percent of women who have ever used contraceptives has no education, while 5.6% of those currently using reported having no education. There are more women with secondary (50.6%) and higher (57%) education who have

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ever used contraceptives than there are for those currently using – 29.5% and 35.3% respectively for secondary and higher education.

	Ever used contraceptives						Currently using contraceptives					
	No		Yes		Total		No		Yes		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Spousal Intimacy												
Emotional	2,894	66.7	1,447	33.3	4,341	100	3,536	81.5	805	18.5	4,341	100
Physical	3,964	64.7	2,162	35.3	6,126	100	4,923	80.4	1,203	19.6	6,126	100
Sexual	3,862	64.6	2,113	35.4	5,975	100	4,799	80.3	1,176	19.7	5,975	100
Education												
No Education	2,877	85.4	494	14.7	3,371	100	3,177	94.3	194	5.8	3,371	100
Primary	824	62	505	38	1,329	100	1,055	79.4	274	20.6	1,329	100
Secondary	1,291	49.4	1,324	50.6	2,615	100	1,845	70.6	770	29.5	2,615	100
Higher	321	43	425	57	746	100	483	64.8	263	35.3	746	100
No. of children												
Less than 2 children	2,286	72.7	858	27.3	3,144	100	2,710	86.2	434	13.8	3,144	100
2 - 4 children	1,482	59.6	1,006	40.4	2,488	100	1,902	76.5	586	23.6	2,488	100
> 4 children	1,545	63.6	884	36.4	2,429	100	1,948	80.2	481	19.8	2,429	100
Family Income												
Low income	2,769	82.8	577	17.2	3,346	100	3,080	92.1	266	7.95	3,346	100
Middle income	1,116	66.4	566	33.7	1,682	100	1,391	82.7	291	17.3	1,682	100
High income	1,428	47.1	1,605	52.9	3,033	100	2,089	68.9	944	31.1	3,033	100
Age												
15 - 30	353	70.5	148	29.5	501	100	418	83.4	83	16.6	501	100
31 - 49	3,238	62.3	1,958	37.7	5,196	100	4,113	79.2	1,083	20.8	5,196	100
50 and above	985	69.5	433	30.5	1,418	100	1,201	84.7	217	15.3	1,418	100
No. of Obs	5,313		2,748		8,061		6,560		1,501		8,061	

Table 1: Descriptive Statistics of Study Variables.

Twenty seven percent of women who have ever used contraceptive has less than two children, compared to 13.8% of their currently using counterparts. More ever-used women have 2-4 children (40.4%) than currently using women (23.6%) and having more than four children is more common with ever-used woman (36.4%) than with currently using women (19.8%).

Higher family income seems to be associated with contraceptive use. Seventeen percent of women that have ever used contraceptive are poor, 33.7% and 52.9% are of the middle-, and higher-income levels, respectively. For those currently using contraceptive, 7.9% are poor, 17.3% belong to the middle-income level, while 31.1% are rich.

Thirty percent of women aged 15-30 years has ever used contraceptives, while 16.6% of women within that age bracket are currently using. Thirty eight percent and 30.5% of women that have ever used contraceptives are respectively aged 31-49, and above 50 years. Twenty one percent of those currently using contraceptive are aged 31-49 years, while 15.3% of them are above 50 years.

Dependent variable: Contraceptive use (Ever used)			
	Coefficient	**Odds ratio**	**(95% conf. interval)**
Spousal intimacy			
Emotional	-0.4151*** [0.0657]	0.6602	(-0.5440 -0.2863)
Physical	0.5068*** [0.1149]	1.6599	(0.2817 0.7319)
Sexual	-0.1374 [0.1120]	0.8716	(-0.3569 0.0821)
Education			
No education	RC		
Primary	0.9987*** [0.0799]	2.7147	(0.8420 1.1553)
Secondary	1.4877*** [0.0768]	4.4269	(1.3370 1.6383)
Higher	1.6614*** [0.1074]	5.2668	(1.4509 1.8719)
Number of Children			
Less than 2 children	-1.0160*** [0.0836]	0.3621	(-1.1850 -0.8469)
2 - 4 children	-0.2880*** [0.0681]	0.7498	(-0.4256 -0.1503)
More than 4 children	RC		
Family income			
Low income	RC		
Middle income	0.4471*** [0.0887]	1.5638	(0.2680 0.6263)
High income	0.9567*** [0.0906]	2.603	(0.7736 1.1397)
Age (Yrs.)			
15 - 30	0.2981*** [0.1383]	1.3473	(0.0271 0.5691)
31 - 49	0.1874* [0.0972]	1.2061	(-0.0032 0.3780)
50 and above	-0.0429 [0.1185]	0.958	(-0.2752 0.1894)
Cons	-1.8574*** [0.1287]	0.1561	(-2.1096 -1.6052)
No. of Obs.	8,061		

Table 2: Logistic Regression Estimates for Women who have Ever used Contraceptive.
Note: Values in square brackets are the standard errors of the coefficients. ***, **, and * denote 1%, 5%, and 10% significance levels respectively. RC denotes reference category.

The regressions results presented in Table 2 highlight the findings for women who have ever used contraceptives. The results reveal that, respectively, emotional, and physical intimacy are significantly negatively and positively correlated with ever-use of contraceptive. While contraceptive use tends to decrease with rising emotional intimacy, it increases with increased physical intimacy. The odds ratio indicates that women who enjoy physical intimacy are 1.66 times more likely to have ever used contraceptives than women who do not enjoy such intimacy.

Education is significantly associated with ever-use of contraceptive, and it tends to increase as educational attainment increases. For any one unit change in the primary, secondary, and tertiary education, probability of ever-used contraceptive rises by 0.99, 1.48, and 1.66 units, respectively. The odds ratios show that women who completed

primary education are 2.71 time more likely to have ever used contraceptive than women who had no education. Likewise, women with secondary and tertiary education are respectively 4.43 and 5.27 times more likely to have ever used contraceptive than women without education.

Number of children is negatively and significantly associated with ever use of contraceptive. The odds against using contraceptive diminishes with increasing number of children. Households with less than two children and those with 2-4 children are respectively 0.36 and 0.75 times less likely to have ever used contraceptive.

Household income is a significant positive determinant of contraceptive use. Compared to low-income households, middle income households are 1.56 times more likely to have ever used contraceptive. Similarly, households in the high-

income category are 2.60 times more likely to have ever used contraceptive than those in the low-income group.

Different ages groups react differently to use of contraceptive. While age above 50 years is not significantly associated with contraceptive, women between the ages of 15 and 49 are more likely to use it. Specifically, women between the ages of 15 and 30 years, and those aged 31-49 are respectively 1.35 and 1.21 times more likely to use contraceptive than those aged 50 years and above.

Dependent variable: Contraceptive use (Currently using)			
	Coefficient	**Odds ratio**	**(95% conf. interval)**
Spousal intimacy			
Emotional	-0.3147*** [0.0754]	0.73	(-0.4625 -0.1668)
Physical	0.4703*** [0.1355]	1.6005	(0.2048 0.7359)
Sexual	-0.1139 [0.1318]	0.8923	(-0.3723 0.1445)
Education			
No education	RC		
Primary	1.1798*** [0.1061]	3.2537	(0.9719 1.3877)
Secondary	1.6182*** [0.1013]	5.0442	(1.4197 1.8168)
Higher	1.8601*** [0.1281]	6.4247	(1.6091 2.1112)
Number of Children			
Less than 2 children	-1.0658*** [0.1141]	0.3444	(-1.2964 -0.8353)
2 - 4 children	-0.2653*** [0.0878]	0.7669	(-0.4428 -0.0879)
More than 4 children	RC		
Family income			
Low income	RC		
Middle income	0.3680*** [0.1055]	1.4489	(0.1548 0.5812)
High income	0.8454*** [0.0952]	2.329	(0.6531 1.0378)
Age (Yrs.)			
15 - 30	0.1858*** [0.1662]	1.2042	(-0.1399 0.5116)
31 - 49	-0.0391 [0.1183]	0.9616	(-0.2710 0.1927)
50 and above	-0.3334*** [0.1448]	0.7165	(-0.6172 -0.0496)
Cons	-2.8618*** [0.1621]	0.0572	(-3.1795 -2.5441)
No. of Obs.	8,061		

Table 3: Logistic Regression Estimates for Women who are Currently using Contraceptives.
Note: Values in square brackets are the standard errors of the coefficients. ***, **, and * denote 1%, 5%, and 10% significance levels respectively. RC denotes reference category.

In Table 3, we present the results when current use of contraceptive is the dependent variable. The results are slightly different from those presented in Table 2. Women who enjoy physical intimacy are 1.6 times more likely to be currently using contraceptive than those enjoying sexual intimacy. Conversely, those reporting emotional intimacy are 0.73 times less likely to be currently using contraceptive.

The effect of educational attainment on contraceptive use among women who are currently using it is similar to those that have ever used, although with varying magnitude. While the three levels of educational attainment show positive correlation with contraceptive use, the odds in favour of currently using contraceptive is highest for women with tertiary education. Specifically, women with primary education are 3.25 times more likely to use contraceptive than women without education. The odds are higher for women with secondary and tertiary education; respectively, both categories are 5.04 and 6.42 times more likely to be currently using contraceptive, than woman who had no education.

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A significant inverse relationship is observed between number of children and the probability of currently using contraceptives. Respectively, women with less than two children and those with 2-4 children are 0.34 and 0.77 times less likely to adopt family planning. Household income is a significant causal factor for contraceptive use. The higher the income level, the higher the odds of using contraceptive. Specifically, while middle-income households are 1.45 times more likely, households in high income group are 2.33 times more likely to be currently using family planning than low-income households.

Current use of contraceptive is significantly associated with age. However, the magnitude and nature of the association varies by age groups. While women within 15-30 years are 1.2 times more likely to be currently using contraceptive than those between 31 and 40 years old, women aged 50 years and above are 0.72 times less likely to adopt family planning.

Discussion

The findings on spousal intimacy suggest that different measures of intimacy exert different effects on the probability of using contraceptive. The finding on emotional intimacy may imply that couples that share emotional intimacy rarely engage in conjugal activities or that the women are not able to elicit their partners' support for family planning. It could also imply that such couples may have a firm resolve to manage as much children as they could have, thus diminishing their demand for family planning services. This finding corroborates that of MacQuarrie KLD, et al. [7] in Egypt.

Conversely, women that experience physical intimacy have high demand for contraceptive because such intimacy may lead to sexual activities, warranting the need for use of family planning services. Furthermore, the result is supported by the argument that physical intimacy engenders communication between couples, which has been found to be positively and significantly associated with contraceptive use [12-14].

The results on education confirm that there is an incremental propensity to use contraceptive as educational attainment rises. As women attain higher level of education, their desire to have small- to medium-sized family increases. This could be because of their understanding of the cost implications of training large number of children. That desire could also be informed by their preference for and pursuit of career fulfilment over childbearing. This finding is similar to the results obtained by Brice NNG, et al. [28], that female education is strongly associated with the contraception choice of women in Cameroun, and Ajefu JB, et al. [29] in Nigeria.

Women with at most four children are less likely to use contraceptive. This could be attributed to their desire to have more children. In Nigeria, average number of births per woman is 5.2 children [21]. Indicating an inherent tendency to have more than four children. Similar findings were reported by Islam AZ, et al. [26] in Bangladesh, and Abate M, et al. [30] in Ethiopia. The desire to have more children may be informed by the socioeconomic benefits of having a large family size. These benefits include that the children support family sources of income; provide support to parents at old age; and serve as replacements in the case of child mortality.

Family income exhibits an incremental effect on the odds of using contraceptive: the odds of using contraceptive almost double as households move from middle to high income level. Rising income serves as a form of financial support to families who would have otherwise relied on their children for financial assistance. Thus, increased family income replaces the preference for more children, and increases the odds of adopting family planning. This finding aligns with those of [31,32]. They found that women who receive payment for their labour had more consistent use of contraceptive.

The findings on age are in line with expectation and corroborate the findings of Forty J, et al. [24,33] and [34,35]. These studies find that, in sub-Saharan Africa, contraceptive use is significantly higher among women aged 15–19 years than those aged 40 years and above. Women between the ages of 15 and 30 years are more likely to use contraceptive because their fertility level tends to be higher than that of women above 30 years. Conversely, women above 50 years old, besides reduced fertility rate, may have had the number of children they desire. This explains why they are less likely to use contraceptive than their counterparts aged 31-49 years.

Conclusion

The study is limited by a few factors: first, the responses to survey questions are subjective and may be affected by judgement or recall bias, and distortions. Second, data for the study were collected in 2018. More recent dataset may be used to determine if any changes has occurred in the spousal intimacy-contraceptive use relationship. Third, the study relies on cross-sectional data. Longitudinal studies may be necessary to gauge the dynamics of the relationship between spousal intimacy and contraceptive

Achieving universal coverage of family planning has been one of the overarching public health objectives of the Nigerian government. This is motivated by the evidence that population control through family planning could produce socioeconomic gains for developing countries. Evidence

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suggests that encouraging spousal intimacy may provide a leverage for policy makers in increasing the adoption of contraceptive. However, in Nigeria, nothing is known about how spousal intimacy affects contraceptive adoption, warranting this study.

The objective of the study is to understand if spousal intimacy encourages the use of contraceptives among married women of child-bearing age. The findings are expected to support policymakers in upscaling contraceptive demand through male involvement and couple-based approaches. Logistic regression method was employed for the study with data sourced from the NDHS of 2018.

The findings show that spousal intimacy, particularly the physical measure of intimacy, is significantly and positively associated with contraceptive use. A neutral effect of sexual intimacy is found, while emotional intimacy exerts a negative effect. Evidence further reveals that education, family income, number of children, and age are significant determinants of contraceptive use. For policy, the study recommends that policymakers in the public health space should identify and incorporate spousal-oriented innovations in their family planning programs as these have the potency to improve contraceptive uptake in developing countries.

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